

New Technologies Monitor Congo Forests

The following is based on an article that appeared in the November/December 2013 issue of the U.S. Agency for International Development's (USAID's) Frontlines.

A satellite observatory is on its way to becoming a forest monitoring center of excellence in the Congo Basin region.

Over the past decade, new technologies, including remote sensing and geographic information systems (GIS), have emerged as powerful tools in forest monitoring that can provide critical information about how to protect this valued natural resource.

Remote sensing consists of taking images from satellites over an area ranging from a few square kilometers to the entire globe. GIS integrates hardware, software and data for capturing, managing, analyzing and displaying various forms of geographically referenced information. The technologies have enabled researchers to monitor remote areas not accessible in the past.

USAID has helped bring these technologies to the Congo Basin. After environment ministers from Central African nations decided in 2000 to create a Congo area watchdog organization — called the Central African Forest Satellite Observatory — USAID provided training in field data collection at the University of Kinshasa to people who live in the region.

Between 2005 and 2013, the observatory trained more than 1,500 people in the region in GIS and remote sensing applications, and it is expanding its capacity-building efforts in other Central African countries, USAID said.

The observatory aims to support improved management of natural resources and sustainable development by producing reliable forest-cover change information and building the capacity of public and private conservation partners to use the latest satellite-based tools.

“For many years, the Congo Basin was behind in using scientific data from satellites to monitor the environment, especially the forest-cover change. But now we have built local capacity that can manipulate information from NASA and other cutting-edge sources and publish information products in leading environmental journals,” said Landing Mané, the group’s director.

The published information helps conservation workers better understand and develop suitable programming “that addresses deforestation and forest degradation in the long term,” noted Karl Wurster, a natural resources specialist.

The forests harbor threatened and globally important biodiversity and are a source of food, medicine, materials, fuel and shelter for millions of people.

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